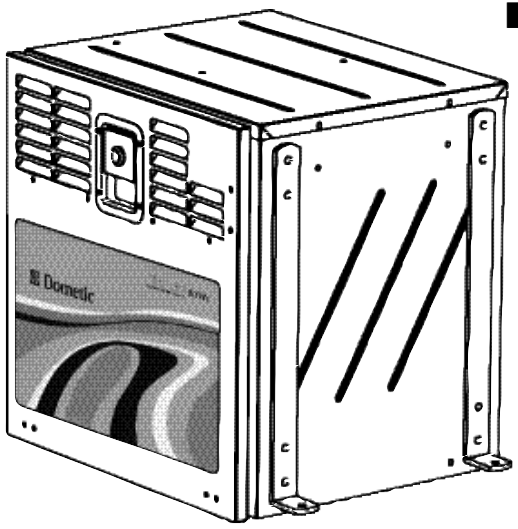
TEC 30

DIESEL GENERATOR



Operation, maintenance and installation manual
Libretto istruzioni per l'uso, la manutenzione e l'installazione
Betriebs-, Wartungs- und Installationsanleitung
Manuel d'utilisation, d'entretien et d'installation
Bedienings-, onderhouds- en installatiehandleiding
Manual de instrucciones para el uso, mantenimiento e instalación
Manual de instruções de uso, manutenção e instalação
Handbok för användning, underhåll och installation
Käyttö-, huolto- ja asennusohje
Bruks- vedlikeholds- og installasjonsanvisning
Betjenings-, vedligeholdelses- og installationsvejledning

Dometic

ENGLISH

With Dometic at home everywhere. Thank you for your decision to buy an Dometic product. They all have been specially conceived for your vehicle, matching totally the requirements of leisure on wheels - with more than 75 years of experience, the most advanced technology, first-rate materials, superb workmanship, functional design and a care for the environment. The unique Dometic EuroService Guarantee offers you additional peace of mind - ensuring that you will derive comfort everywhere from your Dometic products

ITALIANO

Con Dometic come a casa, ovunque. Vi ringraziamo per averci scelto. I prodotti Dometic sono stati espressamente concepiti per il Vostro veicolo; soddisfacendo completamente le esigenze del tempo libero, sui mezzi mobili, con un'esperienza di oltre 75 anni, la tecnologia più avanzata, materiali di prima qualità, superba squadra di tecnici nonché design funzionale ed attenzione per l'ambiente. Usufruite del Servizio di Garanzia Europea che Vi offre completa tranquillità assicurandoVi che trarrete grande comfort ovunque grazie ai "Vostri" prodotti Dometic

DEUTSCH

Mit Dometic überall wie zu Hause. Wir danken Ihnen für Ihre Wahl. Die Dometic-Produkte wurden speziell für Ihr Fahrzeug entwickelt und tragen den Erfordernissen der Freizeit auf Rädern voll Rechnung - mit einer mehr als 75-jährigen Erfahrung, modernster Technologie, erstklassigen Materialien, einem hervorragenden Technikerteam, funktionellem Design und Umweltfreundlichkeit. Nutzen Sie die EuroService-Garantie, mit der Sie ganz ruhig fahren und die Ihnen überall dank "Ihren" Dometic-Produkten größten Komfort sichert

FRANÇAIS

Partout avec Dometic. Merci d'avoir choisi un produit Dometic. Il a été spécialement conçu pour votre véhicule complétant totalement la gamme d'équipements de votre véhicule de loisirs. Dometic, c'est aussi, 75 ans d'expérience, une technologie avancée, du matériel de premier choix, un design fonctionnel et la protection de l'environnement. La garantie Européenne Dometic vous offre, où que vous soyez, la possibilité de profiter partout de votre matériel.

NEDERLANDS

Met Dometic voelt u zich overal thuis. Wij danken u voor uw besluit een product van Dometic aan te schaffen. Al onze producten zijn speciaal ontworpen voor uw voertuig en voldoen volledig aan de vereisten die worden gesteld aan een vakantie onderweg - met meer dan 75 jaar ervaring, de meest geavanceerde technologie, uitstekende materialen, voortreffelijk vakmanschap, functioneel design en zorg voor het milieu. Bovendien biedt de unieke Dometic EuroService Garantie u extra zekerheid - zodat u er zeker van bent dat u overal kunt genieten van het comfort die producten van Dometic u bieden.

ESPAÑOL

Con Dometic en todas partes como en casa. Le agradecemos su elección. Los productos Dometic han sido expresamente concebidos para su vehículo; satisfaciendo totalmente las exigencias del tiempo libre, en medios móviles, con una experiencia de más de 75 años, la tecnología más avanzada, materiales de primera calidad, soberbio equipo de técnicos así como design funcional y respeto al medio ambiente. Disfruten del Servicio de Garantía Europea que le ofrece tranquilidad absoluta, asegurándole que obtendrá gran confort en cualquier lugar gracias a sus productos Dometic. La garantie Européenne Dometic vous offre, où que vous soyez, la possibilité de profiter partout de votre matériel.

PORTUGUÊS

Com Dometic, em todo o lado como em casa. Agradecemos a sua escolha. Os produtos Dometic foram expressamente concebidos para o seu veículo; satisfazendo totalmente as exigências do tempo livre, em meios móveis, com uma experiência de mais de 75 anos, a tecnologia mais avançada, materiais de primeira qualidade, uma excelente equipa de técnicos e um design funcional e respeito pelo ambiente. Aproveite o Serviço de Garantia Europeia, que lhe oferece uma tranquilidade absoluta e lhe assegura que obterá um grande conforto em qualquer lugar graças aos seus produtos Dometic.

SVENSKA

Med Dometic är Du hemma överallt. Tack för Ditt beslut att köpa en Dometicprodukt. De har utvecklats speciellt för Din husvagn eller husbil och lever upp till alla de krav för fritid på hjul -med mer än 75 års erfarenhet, avancerad teknologi, förstklassigt material, oöverträffat hantverk och design samt omtanke om miljön. Den unika Dometic Europagararantin ger Dig trygghet om något skulle hända.

SUOMI

Dometic - kotonaan kaikkialla. Olemme iloisia siitä, että olet valinnut Dometic tuotteen. Tuotteemme on kehitetty yli 75 vuoden kokemuksella liikkuvan lomanviettäjän tarpeisiin ja valmistettu ensiluokkaisista materiaaleista uusimmalla, ympäristöä säästävällä tekniikalla, toimivalla muotoilulla ja korkealla ammattitaidolla. Dometic tuotteita voit käyttää luottavaisin mielin.Ainutlaatuinen Dometic EuroService -takuu ja laaja huoltoverkosto varmistavat., että saat apua ongelmatilanteissa myös matkasi varrella.

NORSK

Med Dometic kan du føle deg hjemme overalt. Takk for at du bestemte deg for å kjøpe et produkt fra Dometic. Alle våre produkter er utviklet spesielt for ditt kjøretøy og lever fullt opp til alle krav om bekvemmelighet i din fritid - basert på mer enn 75 års erfaring, den mest avanserte teknologi, førsteklasses materialvalg og håndverk, funksjonelt design og omtanke for miljøet. Den unike Dometic EuroService-garantien gir deg trygghet og sikrer komfort uansett hvor du måtte befinne deg.

DANSK

Med Dometic kan du føle dig hjemme overalt. Tak for din beslutning om at købe et Dometic produkt. De er alle blevet specielt udviklet til dit køretøj og lever fuldt ud op til kravene om fritid på hjul med mere end 75 års erfaring, den mest avancerede teknologi, førsteklasses materialer, uovertruffent håndværk, funktionelt design og omtanke for miljøet. Den unikke Dometic EuroService Garanti giver dig yderligere ro i sjælen og sikrer, at du takket være dine Dometic produkter vil opleve stor komfort, uanset hvor du befinder dig.

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Figures, descriptions, references and technical data contained in this manual are given as mere example and are not binding.

In pursuing a policy of constant product and safety improvement, DOMETIC reserves the right to effect changes at any time without undertaking to give prior notice or to update this manual every time.

Keep this document for future reference.

“The product is warranted in accordance with the enforced Law and regulations implementing the Directive 1999/44/EC.”

The Manufacturer’s warranty does not extend to Product failures, defects or damage arising from and/or attributable to a wrong installation.

The Consumer is entitled to let the Product be installed by an authorised dealer, not bound by Dometic. The warranty extends to failures or defects in the gen-sets which shall become apparent within the warranty period. The warranty shall cease to have effect if, during the two-year warranty period, the gen-set is used for more than 1,000 hours or if the recommended service schedule is not completed.

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Operation, Maintenance and Installation manual
Generator

Libretto istruzioni per l'uso, la manutenzione e l'installazione
Generatore

Bedienungs- und Wartungsanleitung
Generator

Mise en route, entretien et installation
Generateur

Handleiding voor bediening, onderhoud en installatie
Generator

Manual de instrucciones para el uso, la manutención y la instalación
Generador

Livrete de instruções para uso, manutenção e instalação
Gerador

Handbok för drift, underhåll och installation
Generator

Käyttö-, huolto- ja asennusohje
Generaattori

Brukerveiledning og manual til vedlikehold og installasjon
Generator

Brugervejledning og manual til vedligeholdelse og installation
Generaattori

GB I D F NL E P S FIN N DK

GB

1.1 Purpose of the manual

This manual has been made up by the Manufacturer and is an integrated part of the generator's equipment.
The information, if respected, will guarantee the correct use of the generator.
The part of the manual reserved for the users is indicated by the symbol while the part reserved for the experts installing the generator is indicated by the symbol

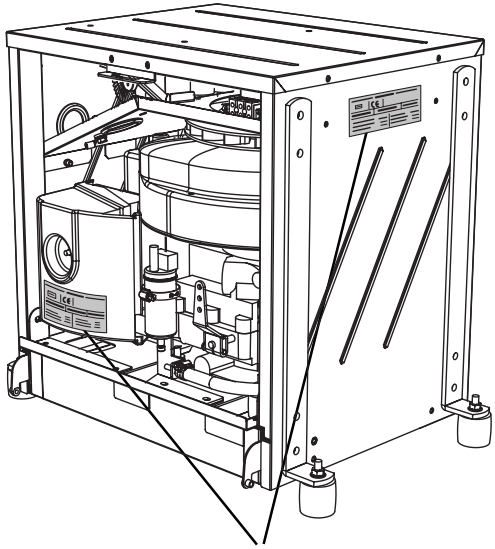
The following symbols have been used to highlight some parts of the text:

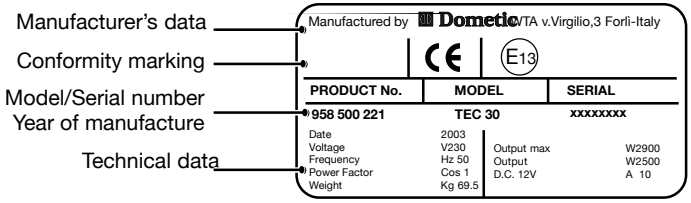
The operation can be dangerous.

Useful suggestions.

Information on the protection of the environment.

1.2 Data Plate





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The company Dometic is not responsible for any damage caused by generator malfunctions.

1.3 Safety

The generator is installed in a closed casing. Therefore, there is no danger of accidental contacts with moving parts or wires under voltage. The door is fitted with a key lock which shall be kept out of reach by children or non-authorised people.

Warning

- *Check the generator before using it every time. In this way it is possible to prevent accidents or damage to the motor.*
- *To prevent fire hazards and to keep the generator in an efficient working condition, do not close the same in a case or an enclosed space such as an alcove but install it in a well-ventilated area.*
- *Keep children and animals away from the generator when it is running, as it can heat up and cause burns and injuries, both directly and through the systems it is supplying.*
- *Learn how to turn the generator off quickly and how to use the controls. Never leave the generator in the hands of people who are not trained to use it.*
- *The generator must only be used with the generator door closed.*
- *Keep flammable substances away from the generator such as for example: petrol, paints, solvents etc.*
- *Make sure that the hot parts of the generator do not come into contact with materials that could catch fire.*
- *Fill the generator with fuel in a well-ventilated area with the generator turned off. Petrol is highly flammable and can explode.*
- *Never overfill the fuel tank. There should not be fuel in the tank filling throat. Check that the cap is tightly closed.*
- *If you spill any fuel, clean it up thoroughly and wait for the fumes to evaporate before starting the engine.*
- *Exhaust gases contain carbon monoxide, an extremely poisonous gas, which is odourless and colourless. Avoid inhaling exhaust gases. Do not run the engine of the generator in a closed garage or room without very good ventilations.*
- *Do not touch the generator or the connections with wet hands.*
- *Do not replace fuses or thermal cutouts with others of a higher amperage.*
- *Any checks carried out on the electric parts should be done by authorised personnel with the engine turned off.*
- *Install the generator in a stable area. Do not incline the generator by more than 20° with respect to the vertical plane.*
- *Sudden braking or acceleration, or curves taken abruptly with the vehicle can cause problems in the pumping system of the generator and make it stall.*
- *When storing the generator up for a long period of time, start it at least once every 30 days and leave it running for at least 15 minutes.*
- *Leave the generator on for a few minutes without charge after use before switching it off.*

The generator is made to meet the safety regulations indicated in the declaration of conformity.

1.4 Noise

The generator has been tested for noise emissions at the qualified independent laboratory DNV Modulo Uno which has issued the EEC-certificate based on EC-DIRECTIVE 2000/14.

GUARANTEED AND MEASURED SOUND POWER LEVEL:

TEC30 ..... LwA 85

SOUND POWER LEVEL measured from 7mt .... dB(A) 60

GB

1.5 Description of the generator

Warning

The TEC 30 generator has been designed and produced to be used only on caravans, motor homes and commercial vehicles.
Therefore it has not been designed to be used on other types of vehicles or on any kind of watercraft. The company Dometic, as it is impossible to envisage every possible use and type of installation, declines any responsibility for every type of use and installation which is not explicitly mentioned.

The generator has been designed to produce alternating current at 230V and 50 Hz, capable of supplying power to various systems. Therefore it is fitted with an inverter, so that it can supply systems that are very sensitive to the quality of the energy supplied, such as personal computers for example.
The generator is installed in a sheet metal steel casing which is insulated and soundproofed with special soundproofing materials.

1.6 Recommandations for use

To use the generator in the best way it is a good idea to pay attention to even small overloads, which if prolonged, will cause the protective thermal cutouts to trip.
When running in it is important not to put the new engine under a load that exceeds 70 % of the nominal load, at least for the first 50 working hours; then we recommend a normal use of the generator with a load equal to roughly 3/4 of the maximum declared continuous load, this in order to prolong the life of the generator and maximize efficiency.
When the generator is hot we recommend starting by pushing the start button briefly, while when the generator is cold hold the start button down for longer.

1.7 Fuel

All diesel oils which satisfy the following specifications are suitable:

EN 590 or
DIN 51601 - DK or
BS 2869 A1 / A2 or
ASTM D975 -1D / 2D

At temperatures below 0°C, winter-grade fuel should be used or paraffin added to the fuel well in advance.

Lowest ambient temperature when starting, in (°C)	Paraffin content for:	
	Summer fuel	Winter fuel
0 a -10	20%	-
-10 a -15	30%	-
-15 a -20	50%	20%

N.B.
To facilitate the start up of the generator with low temperatures, the preheating glow plug available (accessory AG165) may be installed.

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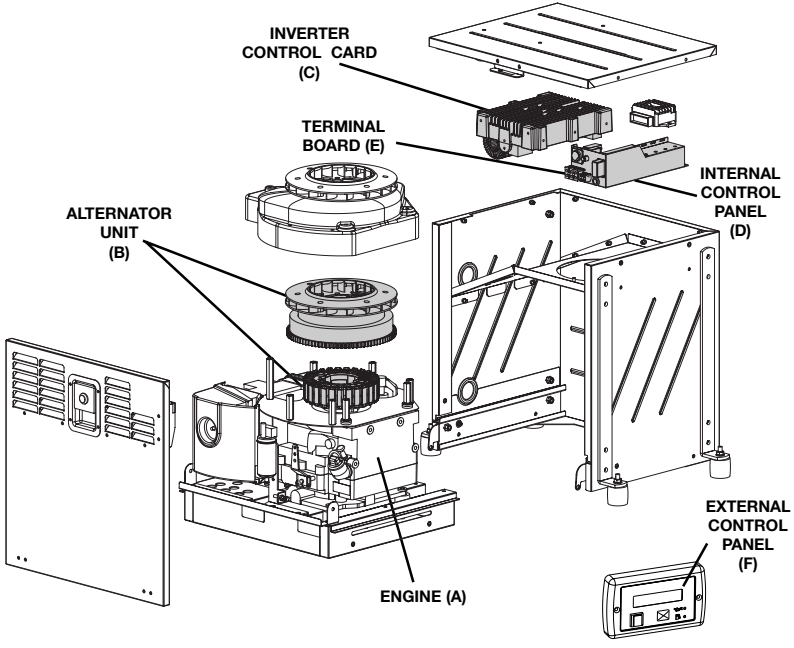
1.8 Operation description

The main elements of the TEC 30 generator are: an engine (a), a permanent magnet alternator (b), an inverter (c), an internal control panel (d), a terminal board (e) and an external control panel (f).
When the engine runs it drives the alternator to which it is solidly connected, which in turn generates alternating current that supplies the inverter. The inverter “converts” the voltage supplied into a higher quality, perfectly stable voltage of 230 V and 50Hz supply.
The terminals, the socket where the extension of the external control panel is connected and the safety switch are located on the internal control panel.



The external control panel is equipped with:

- buttons to start and stop the generator
- a back lit LCD screen showing the main electrical properties, an indicator shows that the generator is working properly and an hour counter is also displayed. In the case of problem the alarm messages are displayed on this screen.
- LED indicators indicate low levels of petrol and oil.

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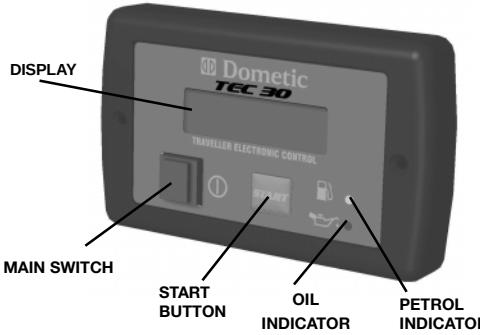
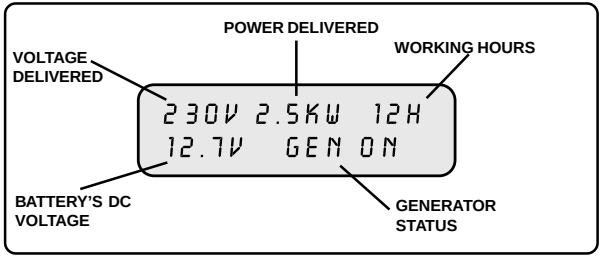
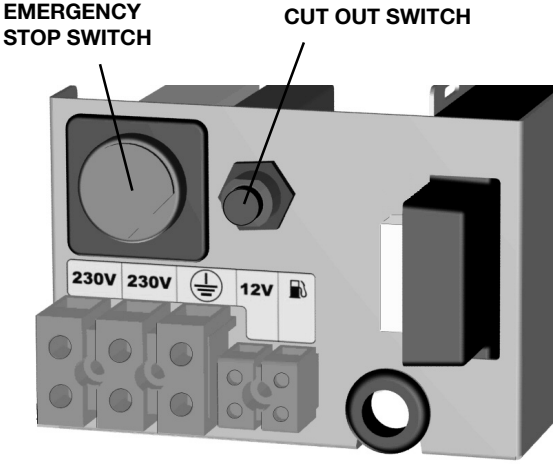
1.9 External control panel





1.10 Internal control panel



Operation description

MAIN SWITCH:	turns the panel on/stops the generator
START BUTTON:	starts the generator
PETROL INDICATOR:	indicates that you are using the fuel reserve
OIL INDICATOR:	indicates a low oil level and the engine automatically stops
EMERGENCY STOP SWITCH:	stops the generator immediately in an emergency
CUT OUT SWITCH:	continuous current thermal cut out protection

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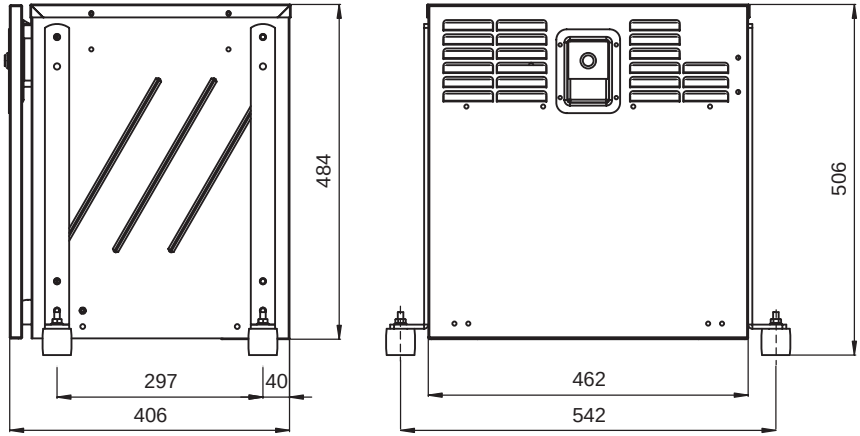
1.11 Technical data



DESCRIPTION	UNIT OF MEASURE	VALUE
VOLTAGE SUPPLIED	V	230 ± 10%
MAX CONTINUOUS POWER	W	2500 ± 5%
FREQUENCY	Hz	50 ± 1%
DIRECT CURRENT POWER	V / A	12 / 10
THD	%	1
CONSUMPTION	g/HP/h	200/210
WEIGHT	kg	69.5

GB

1.12 Table describing the alarm messages appearing on the display

DISPLAYED MESSAGE	DESCRIPTION	GENERATOR BEHAVIOUR	ACTIONS
LOW BATTERY	Indicates that the battery voltage is below the minimum value necessary to start the generator.	The generator does not start.	Check the efficiency of the battery before starting the generator.
OIL CHANGE	This message appears every time the hour counter of the machine reaches the service interval pre-set to change the engine oil.	The generator continues to run.	Change the oil (see p.22) before restarting the generator by holding the start button down for longer.
NO FUEL	Indicates that you are using the fuel reserve.	The generator continues to run.	Refuel.
OIL ALERT	There is no more oil in the oil tank.	The generator stops.	Fill up (see page 11).
GENERATOR ALERT!	General alarm message; it is displayed for instance when the check ring of the carburettor throttle (step motor) is defective and the M110 module cannot check the motor speed	The generator stops.	SeeTroubleshooting table on page 20. If the problem persists, address to the nearest service centre.
OVERLOAD!	Indicates an output overload of the supplied systems.	The inverter stops and voltage is no longer supplied, but the engine continues to run for a correct cooling of the internal parts.	Reduce the connected load, wait a few minutes to cool down the generator. Stop the engine by pressing the main switch button. Then restart the generator.
SHORT CIRCUIT	Indicates an output short of the supplied systems.	The inverter stops and voltage is no longer supplied, but the engine continues to run for a correct cooling of the internal parts.	Check all the connected systems, wait a few minutes to cool down the generator. Stop the engine by pressing the main switch button.
OVER TEMPERATURE	This message is displayed in the event of a thermal overload.	The inverter stops and voltage is no longer supplied. The engine continues to run for a correct cooling of the internal parts, then stops and the message displayed is “RESTART GEN?”.	Let the generator cool down, wait a few minutes and restart the unit.
LOW POWER ENGINE	Signals a reduction of the voltage supplied to the inverter.	The generator stops.	Reduce the connected load and restart the generator.
RESTART GEN?	This message appears after any stop of the generator.	The generator stops.	Turn off and restart the generator.
GEN CAL	This message appears at the generator start-up and indicates the calibration phase preceding any start-up. The generator does not produce current yet.	The generator run but voltage is not supplied.	Wait a few seconds.
GEN WAIT	Message displayed between one start attempt and the other.	The generator not run.	Wait until the message goes off before attempting a new start.
GEN ON	Indicates that the generator is running.		
GEN OFF	Indicates that the generator not run	The generator not run.	Push the start button if you want to restart the generator

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1.13 Routine maintenance

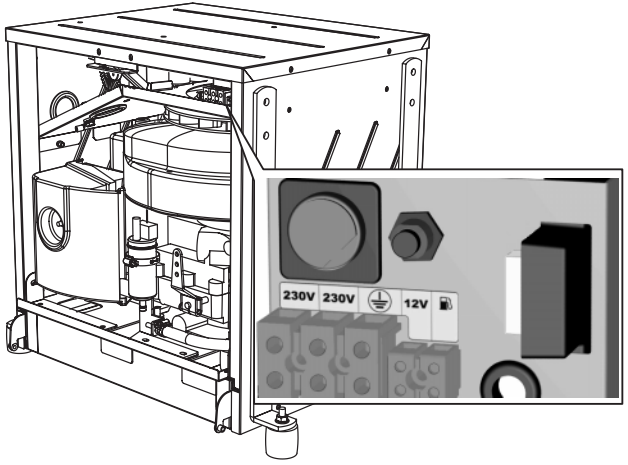
To perform these checks you should open the door of the generator taking the following precautions:

The generator must not be running and all of the parts must be cold.

Set the safety switch on the internal control panel to “O” (OFF).
Disconnect the positive pole (+) of the vehicle’s battery

IMPORTANT: Use only genuine spare parts. The generator may get damaged if other than genuine parts having a different quality standard are used.

IMPORTANT:
Remember to reconnect the positive pole (+) of the vehicle’s battery and set the switch back to “I” (ON) once you have finished the checks.

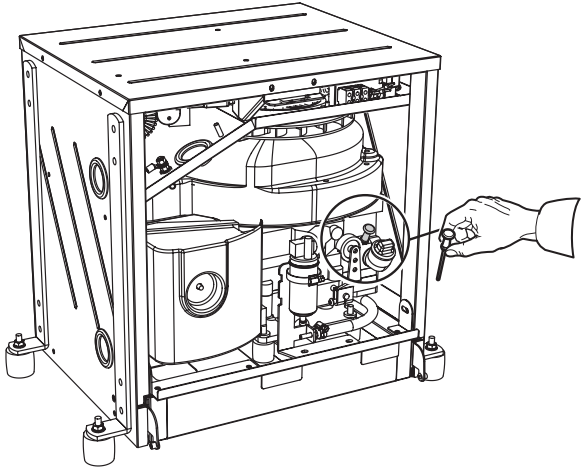


1.14 Checking the oil level

Remove the oil filler and clean the dipstick with a cloth.
Refit by screwing the dipstick.
Remove the dipstick and check that the oil level is between the two (min. and max.) marks.
Add oil if necessary through the filler. Use only the oil recommended by the manufacturer!

Refit the plug.

IMPORTANT:
Perform all of the checks making sure the generator is in a horizontal position.



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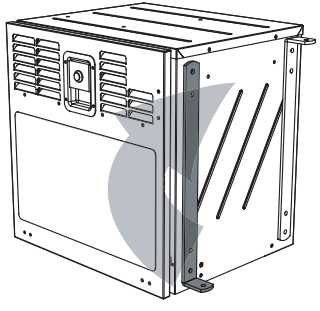
2.1 Instructions for fixing the generator

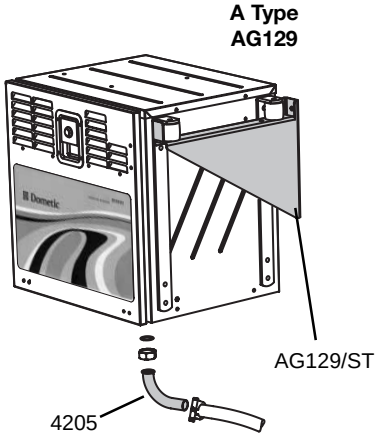
Warning

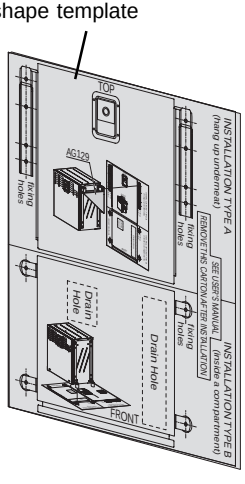
Make sure there is enough space around the casing of the generator for cooling, leaving at least 70 mm of free space between the casing and the surrounding walls or parts. If the air intake of the generator remains behind a wheel of the vehicle, make sure that in the case of rain the wheel will not spray water onto or into the generator taking preventing measures if necessary (ex. antispray guards).

There are two different installation solutions to mount your generator unit: outdoor hanging installation (A TYPE) or installation in a separate compartment (B TYPE).

An “A TYPE” installation may be preferable for the following: smaller overall dimensions, quick installation, ease of access for ordinary and extraordinary maintenance. A “B TYPE” installation instead allows for further soundproofing of the generator unit compartment.







For “A TYPE” installation (hanging installation) the generator unit is fitted with item AG129 (available upon request) consisting of hanging brackets (ref. no. AG129/ST) and a bent exhaust pipe (ref. no. 4205), as shown in the figure. Dismount the hanging brackets and reassemble them upside down (see figure).

Use the pre-printed cardboard sheet supplied with the package as a shape template to secure AG129/ST brackets onto the supporting wall. Secure the generator unit onto the hanging brackets with the vibration dampers supplied.

Mount the bent exhaust pipe and secure the flexible connecting pipe with clamps to the additional muffler

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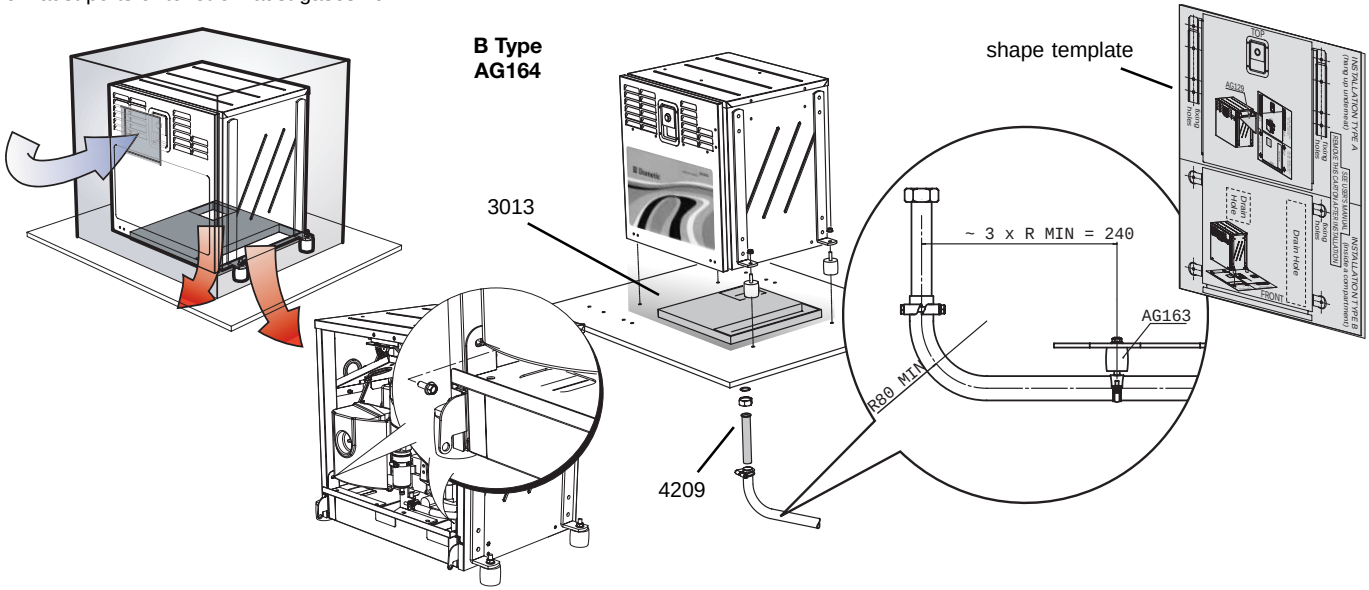
Warning: to allow for proper cooling of the generator unit, maintain a minimum 70mm between the generator unit and the surrounding walls. Pierce an air vent opening on top of the compartment facing outward door of minimum 240 cm^2. Ensure not to obstruct air intake and exhaust ports or to let exhaust gases flow in.



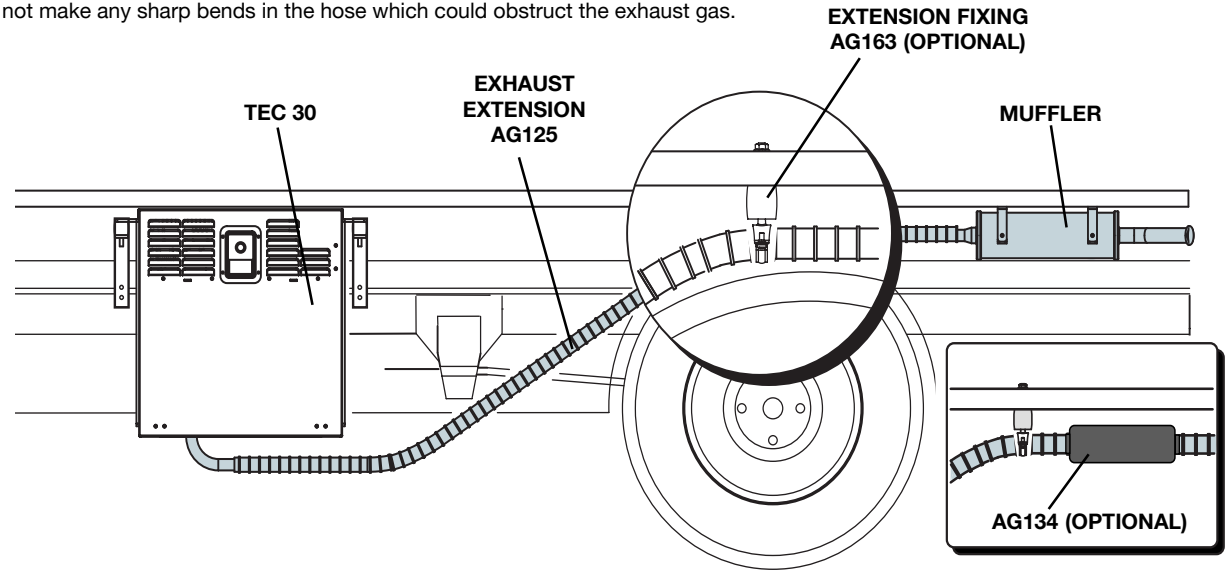
In "**B TYPE**" installation the generator unit is fitted with item **AG164** – available upon request – consisting of a gasket (ref. no. 3013) and a straight extended exhaust pipe (ref. no. 4209) as shown in the figure below.
An airtight separate compartment must be prepared inside the vehicle. This compartment may also be soundproofed.Use the pre-printed cardboard sheet supplied with the package as a shape template to pierce the air vent openings.
Secure the self-adhesive gasket. The gasket is needed to convoy hot exhaust gases out of the compartment.
Remove the screws from the generator unit bottom and insert the two flange nuts to secure the generator unit bottom in the inner position (as shown in the figure). This will allow to loosen the unit bottom for ease of ordinary maintenance of the generator unit.
Mount the straight exhaust pipe and secure the flexible connecting pipe with clamps to the additional muffler.
Ensure that the flexible connection pipe is not overbent once secured. The minimum bending radius should be the same as recommended in the figure.

GB

2.2 Instructions for installing the exhaust system

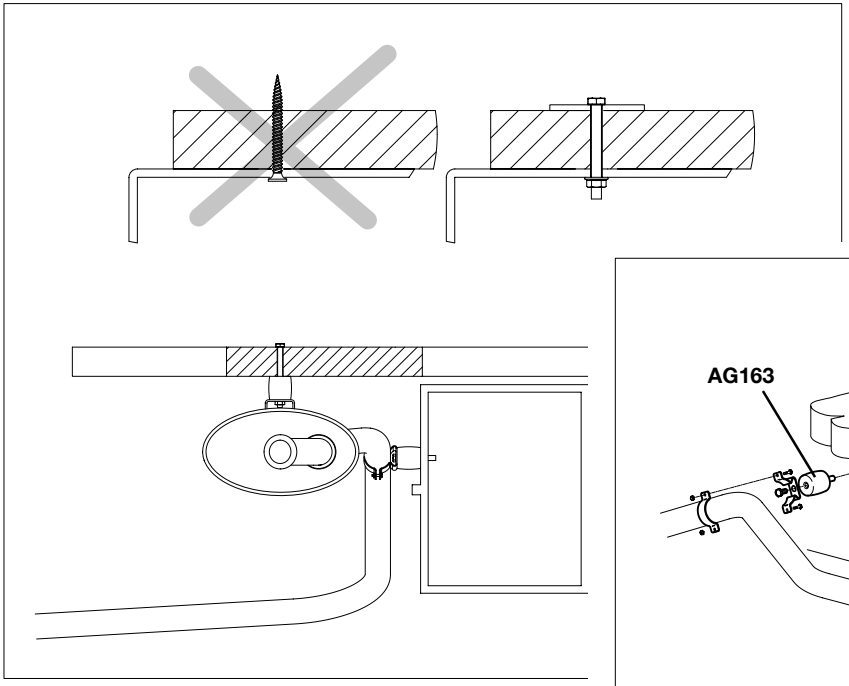
We recommend positioning the elbow of the exhaust pipe in line with the length of the casing (as shown in the figure) so more vibrations can be absorbed.
Use the exhaust extension (AG125) to extend the position of the muffler. Fix the exhaust extension to the vehicle using flexible elements to reduce vibrations (extension fixing is avalaible as accessory upon request - Ref. AG163).
The accessory AG134 is available upon request to improve the soundproof.

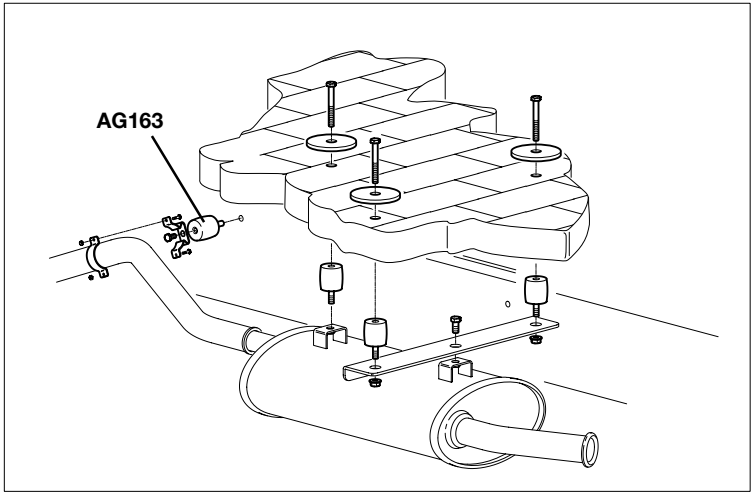
WARNING
Do not make any sharp bends in the hose which could obstruct the exhaust gas.



GB

Instructions for installing the exhaust system





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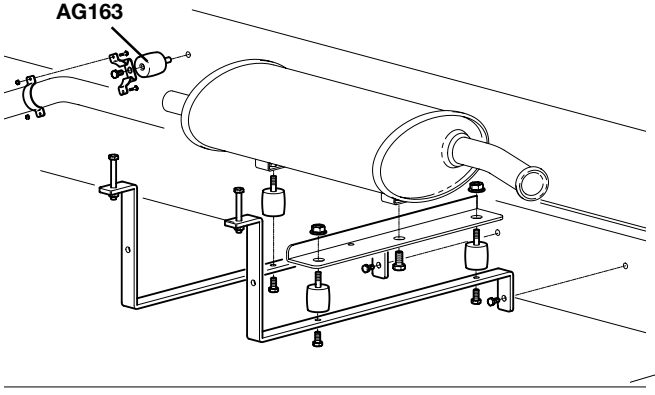
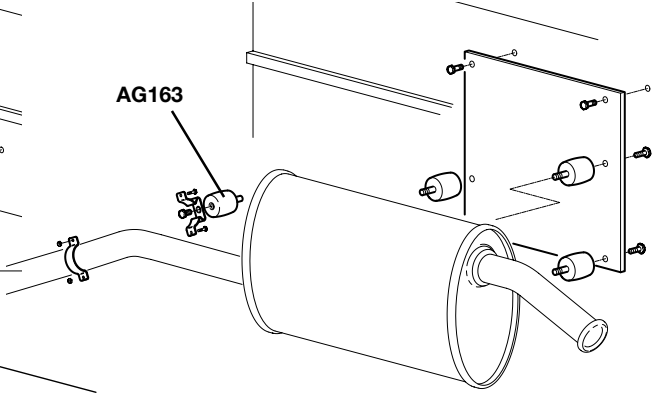
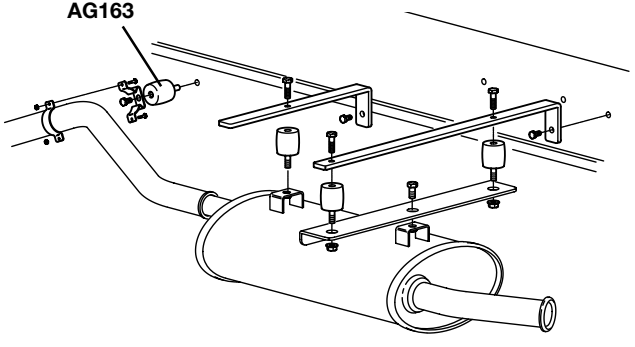
Instructions for installing the exhaust system





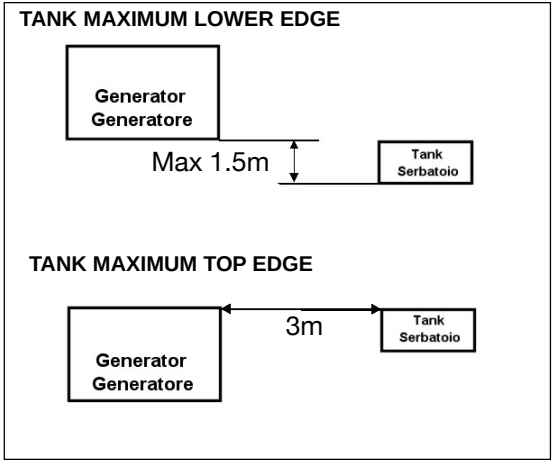


GB

Instructions for the installation of the tank

Generator TEC30 is equipped as standard with an electric pump for pumping fuel. The following should be done.

The fuel tank should be installed with the tank basis at a maximum depth of 1.5 meters below the lower edge of the generator box. For safety reasons ensure not to mount the generator box top edge higher than the tank top edge.



GB

2.3 Instructions for the electrical connection

The Dometic generator is a source of alternate 230V 50Hz tension, able to cope with various power needs.

Warning

You will have to install a relay or commutator in the vehicle's electrical system (ex. the accessory AG 102) in order to prevent damaging the generator when the external mains is connected; in this case we suggest connecting the generator so that it has priority over the external mains network.

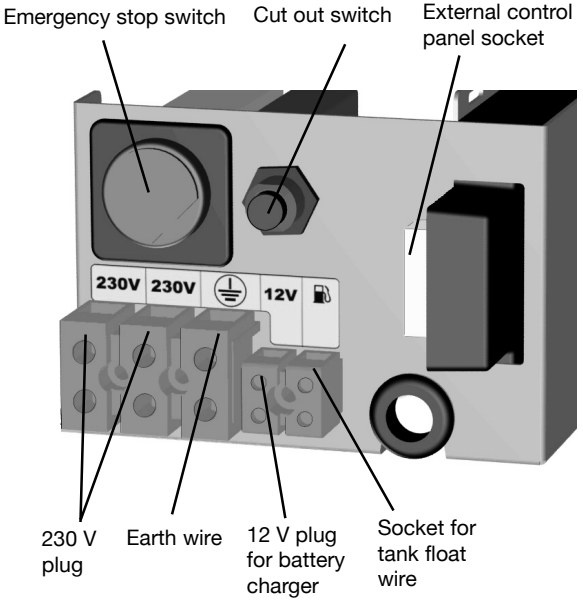
Electric wiring must be effected in conformity with the existing laws and regulations in force in the user's country.
For correct installation performed by the final user, use preventive technical assistance by your seller or by a skilled technician.

For the 230 V use a cable of a standard cross-section as shown in the table; insert it in the casing through the cable guide and connect it to the terminals. Connect the earth wire.

Electrical connection of the battery charger

Use a cable finding the correct section in the chart on the right.
Connect the cable to the connecting terminal and to the positive pole of the battery to be charged.
Should the battery be others than that used to start the generator, then connect the negative pole of this battery to the proper mass point of the generator (see picture on page 19).
NB: The negative pole of the battery should be grounded with the vehicle's frame.

Cross-section mm² 230V (power cables)	Cross-section mm² 12V (battery charger)	Cross-section mm² Length up to 6m (battery connection)	Cross-section mm² Length > 6m (battery connection)
2.5	2.5	16	25



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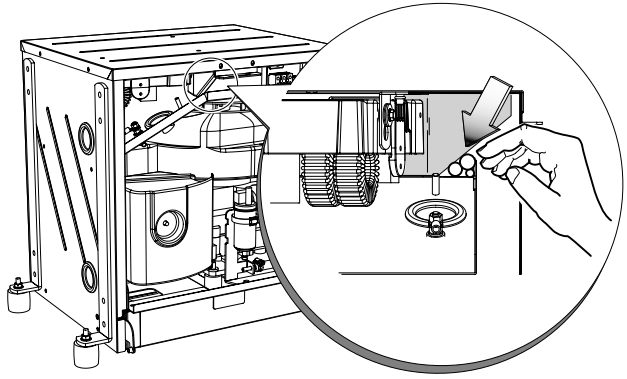
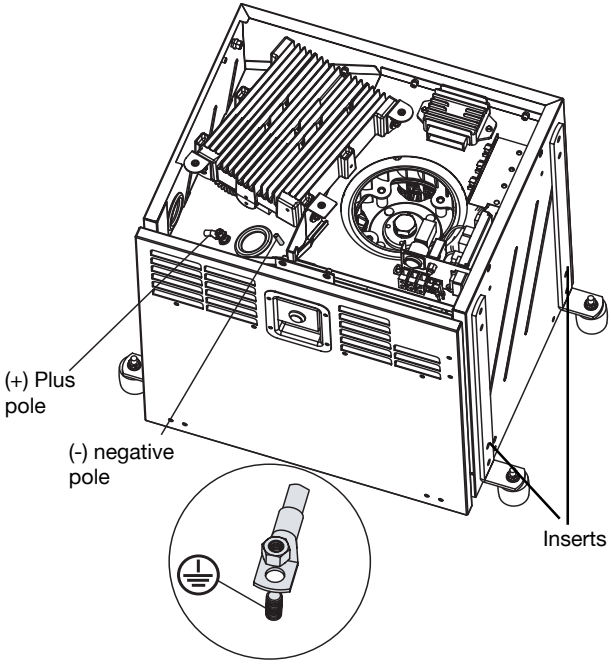
Battery connection

To start the generator, connect it to the positive pole of the vehicle's battery with a sheathed cable of a suitable cross-section as shown in the table. The ground cable must have the same cross-section and be connected or as shown in the figure to the side or from the inserts to the frame of the vehicle. Make sure that the contact is good. If necessary remove paint or rust from the surface of the frame and protect the connection with grease.
To protect the DC wiring use a 100Amp fuse closed to the plus pole of the battery.

External control panel connection

Choose the desired position inside the vehicle, use the extension lead (supplied) to connect the external control panel to the internal control panel of the generator.





GB

3.1 Faults, causes and solutions

○ Operations to be carried out by the user

Operations to be carried out by qualified technicians

CAUSE \ SOLUTION	The emergency stop switch is not to ON	The starter is not powered up	The electrical cables are broken	The generator earth wire (or fuse) is broken	No fuel	Check the load supplied	No fuel received from injectors	The air filter is dirty	The Air intakes are obstructed	Inverter is damaged	Load over 2.5 kW	Low battery charge	The starter shaft is dirty	Electric pump unfed/out of order	Too much oil in the engine
By operating the main switch, the panel does not switch on			●	●								○			
By pushing the start button, the generator does not start (the starting motor does not run)	○	●	●	●						●		○	○		○
The starting motor runs but the generator does not start			●		○		○		○	●					
The generator tends to stall							○	●	○	●	○			●	○
The generator runs but it does not produce current						○				●					
The generator starts, then stops and display “generator allert” message										●					
The produced current oscillates						○	○	●	○	●	○			●	○

GB

3.2 Check list and time intervals

	Maintenance chart	Maintenance work required
8-15	Every 8-15 operating hours, or before each daily startup	Check oil level Check combustion and cooling air intake zone.
250	Every 250 operating hours	Change engine oil (In any case at least once a year) Check and adjust valve clearances. Clean cooling air area. Check screw connections. Clean mesh insert for exhaust.
500	Every 500 operating hours	Change fuel filter element. Dry-type air cleaner maintenance.
1000	Every 1000 operating hours	Clean the oil filter
	Once a year	Vibration-proof fixing point

GB

3.3 Extraordinary maintenance

For some maintenance operations there is the possibility of pulling the generator out by sliding the entire bottom of the generator on the guides fixed to the sidewalls of the casing. To set the generator basis free loosen the harness and unscrew the 4 fastening screws. The generator unit will be extractable by ¾ of its depth. To come to a complete extraction put the generator basis on firm ground to protect it against possible falls and unscrew the 2 limit stop screws. Alternatively tighten the generator basis inserting screws in inner position.

Changing the oil

Warning

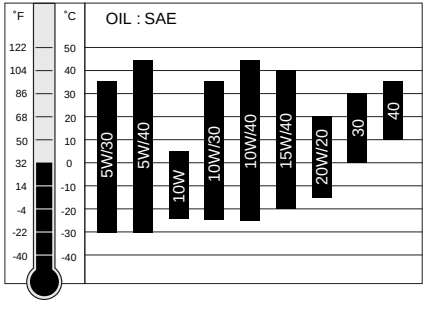
- *Hot oil can burn your skin!*
- *Check the oil level with the engine turned off.*

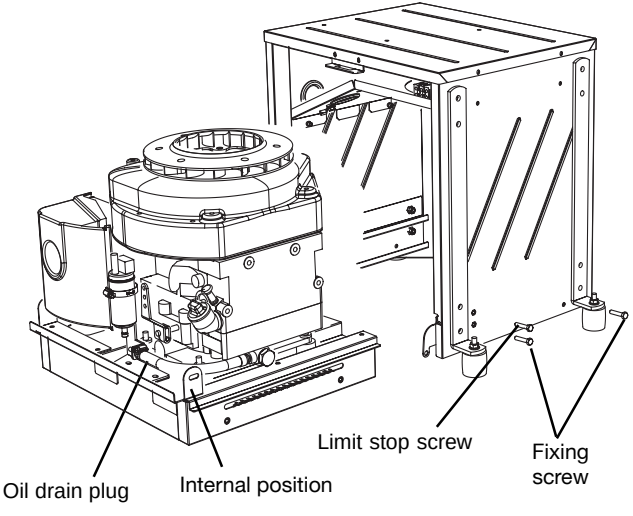
Important

Old oil moust not be disposed of in the environment, but left to a station specialised in the disposal and/or recycling of the same, respecting the laws in the country where the operations are carried out.

Use oil recommended for 4-stroke Diesel engines of these types:
CCMC-D4-D5-PD2 or **API-CD-CE-CF-CG** or **SHPD** (this indication is on the oil can).
SAE 10W-30 oil is recommended for general use at all temperatures.
If you use monograde oil, choose the appropriate viscosity on the basis of the average temperature of the place where the generator is installed.
To drain the old oil easier you should run the generator for roughly 3/5 minutes, in this way the oil is more fluid and will drain better through the drain tube when you remove the drain plug. Refill the generator with oil of the recommended type, through the oil filler.
The quantity of oil is:

0.9 Litres





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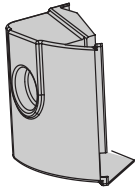
Air filter maintenance

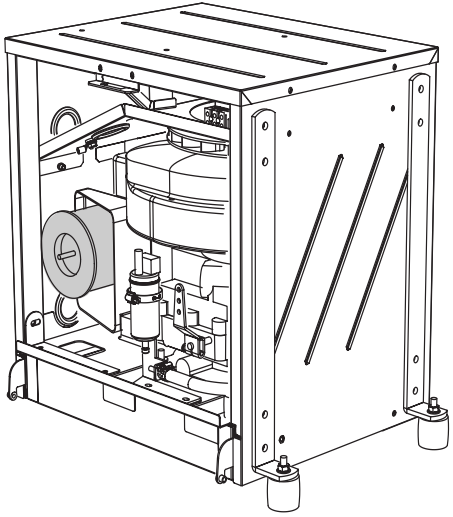
Warning

Do not use diesel or solvents with a low evaporation point to clean the air filter element as it could catch fire or explode.

Important

If the air filter is dirty this reduces the flow of air to the engine. Therefore, to prevent malfunctions we recommend checking the state of the filter periodically, and more often if you are using the TEC 30 in particularly dusty areas.
Never use the engine without the air filter. The engine would wear quickly.





Operations:
Remove the air cleaner cover.
Unscrew and remove knurled nut and take off air cleaner element.
Clean the filter compartment and the cover.
Dirt and other foreign bodies must not be allowed to enter the engine's air inlet points.
The filter cartridge should either be renewed or, depending upon the degree of contamination, cleaned, or checked, as follows:

Cleaning the filter cartridge

Dry contamination

Use compressed air to blow through the filter cartridge from the inside outwards, until no further dirt emerges.
Important ! The pressure must not exceed 5 bar.

Moist or oily contamination

Renew the filter cartridge.

Checking the filter cartridge

Check filter cartridge's gasket surface for damage, Check the filter cartridge for cracks or any other type of damage to the paper filter by holding it inclined towards the light or by shining a light source through it.
Important ! The slightest damage to the paper filter rules out it being used any longer. Re-assemble the filter cartridge in the reverse order of work.

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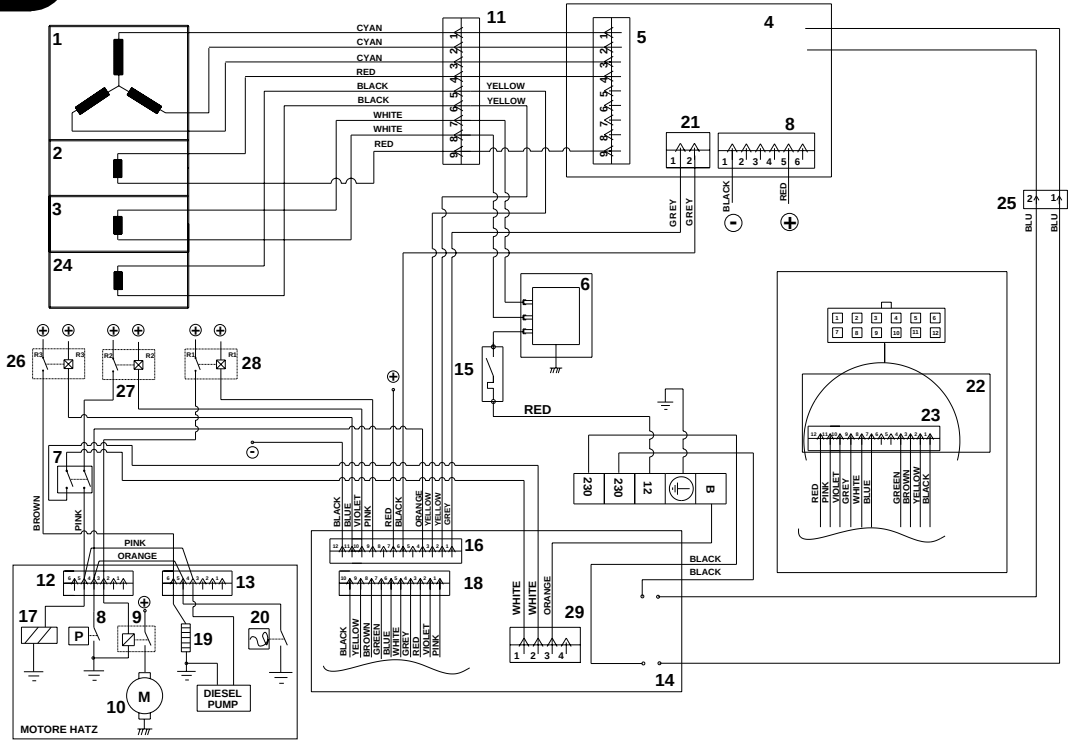
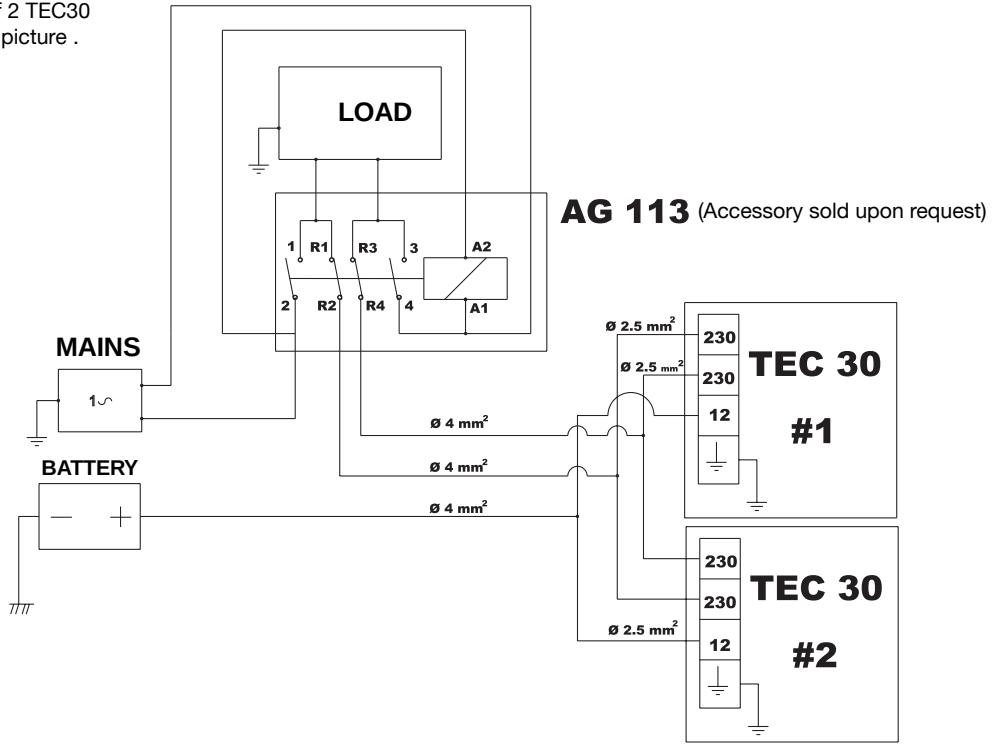


	DESCRIPTION
1	THREE-PHASE WINDING
2	AUXILIARY WINDING
3	AUXILIARY WINDING
4	INVERTER MODULE
5	9-PIN CONNECTOR
6	12V REGULATOR
7	0/1 EMERGENCY STOP SWITCH
8	PRESSURE CONTROL DEVICE
9	START RELAY
10	STARTING MOTOR
11	9-PIN CONNECTOR
12	HATZ 6-PIN CONNECTOR M
13	HATZ 6-PIN CONNECTOR F
14	INTERNAL CONTROL PANEL
15	THERMAL SWITCH
16	INTERFACE MODULE
17	ELECTROSTOP
18	12-PIN CONNECTOR
19	PREHEATING GLOW PLUG
20	TEMPERATURE SENSOR
21	2-PIN CONNECTOR
22	VEHICLE CONTROL PANEL
23	12-PIN CONNECTOR
24	AUXILIARY WINDING
25	CYLINDRICAL CONNECTOR
26	PREHEATING RELAY
27	PUMP RELAY
28	MOTOR START RELAY
29	4-PIN CONNECTOR

GB

For parallel connection of 2 TEC30 follow the diagram in the picture .



Compulsorily: use change-over switch AG113 to protect the units against accidental connection to the main electric line

WARNING!

All generators connected to the wiring system must be on off position before executing any maintenance operation!

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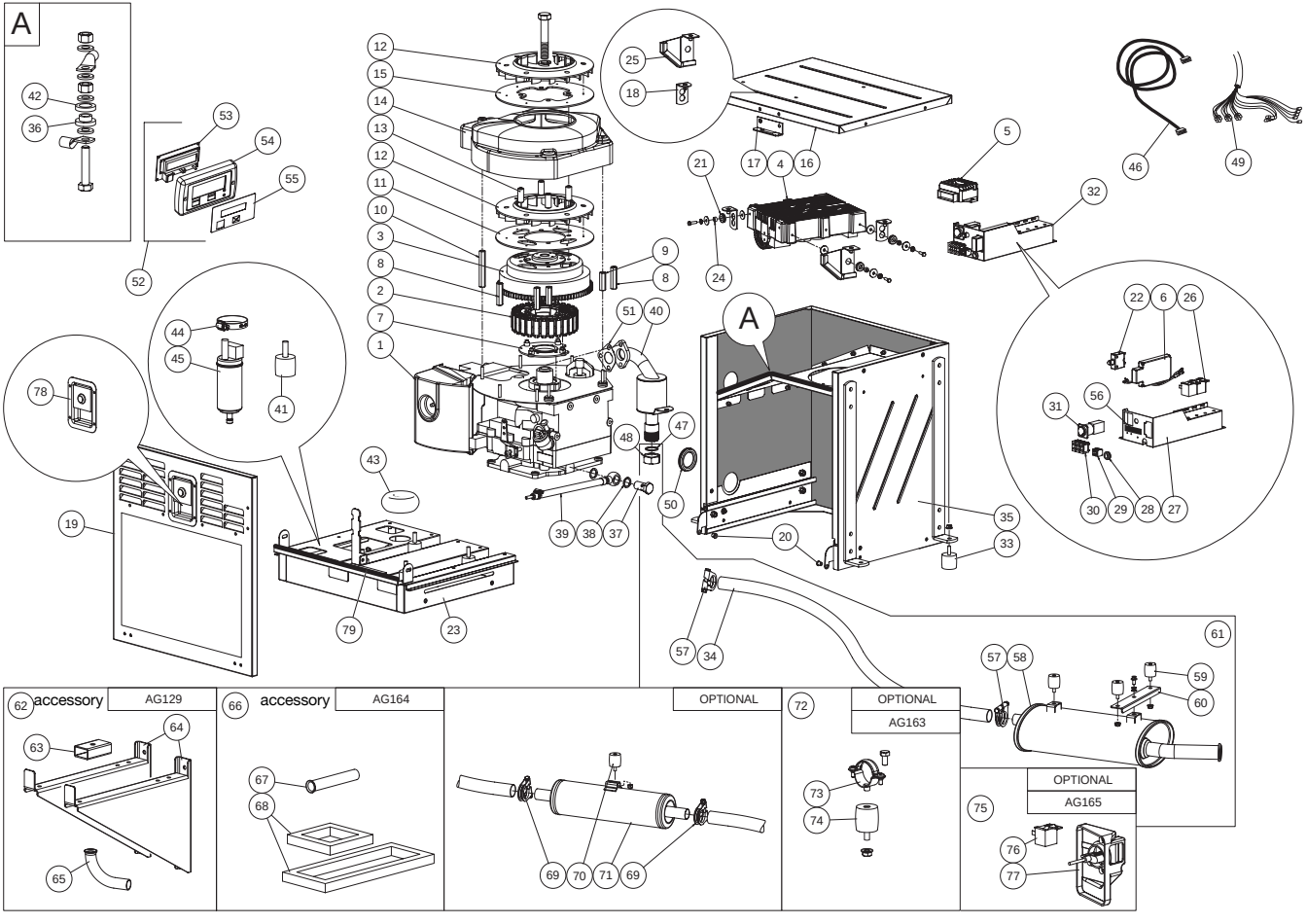
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AG163
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OPTIONAL
AG165
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GB

1	1B20V ENGINE
2	STATOR
3	ROTOR
4	INVERTER
5	12V REGULATOR
6	INTERNAL CONTROL PANEL CARD
7	STATOR CENTRING PLATE
8	MEDIUM SPACER
9	LOW SPACER
10	HIGH SPACER
11	FAN FIXING PLATE
12	FAN
13	SPACER
14	COVER ENGINE
15	FAN FIXING PLATE
16	COVER
17	LIMIT STOP LOCK
18	INVERTER SUPPORT PLATE
19	CASING DOOR
20	BUSH
21	CABLE GUIDE
22	THERMAL CUTOUT
23	CASING BASE
24	SPACER
25	INVERTER SUPPORT PLATE
26	RELAY
27	SUPPORT PLATE INT. CONTROL PANEL
28	CABLE GUIDE
29	TERMINAL
30	TERMINAL
31	BIPOLAR SWITCH
32	CONTROL PANEL
33	VIBRATION DAMPERS
34	EXHAUST EXTENSION
35	GENERATOR CASING
36	BUSH
37	DRILLED SCREW
38	WASHER
39	OIL PIPE
40	EXHAUST PIPE
41	VIBRATION DAMPERS
42	BUSH
43	WIRE WOOL
44	HOSE CLAMP
45	FUEL PUMP
46	CONTROL PANEL EXTENSION
47	WASHER
48	NUT
49	WIRING
50	CABLE GUIDE
51	EXHAUST PIPE GASKET
52	COMPLETE CONTROL PANEL
53	CONTROL PANEL CARD
54	CONTROL PANEL BOX
55	CONTROL PANEL STICKER
56	INT. CONTROL PANEL STICKER
57	HOSE CLAMP
58	SILENCER
59	VIBRATION DAMPER
60	SILENCER FIXING BRACKET
61	COMPLETE SILENCER
62	A TYPE INSTALLATION KIT
63	SPACER
64	BRACKET
65	CURVED EXHAUST PIPE
66	B TYPE INSTALLATION KIT
67	EXHAUST PIPE EXTENSION
68	GASKET
69	HOSE CLAMP
70	VIBRATION DAMPER
71	SILENCER
72	EXTENSION FIXING
73	HOSE CLAMP
74	VIBRATION DAMPER
75	PREHEATING GLOW PLUG KI
76	REALY
77	PREHEATING GLOW PLUG
78	LOCK
79	GASKET